

**OVERVIEW
AVIAN
INFLUENZA**

2/13/06

PREPARING FOR PANDEMIC FLU

What You Can Do

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza virus emerges for which there is little or no immunity in the human population, begins to cause serious illness, and then spreads easily person-to-person worldwide. The federal government, states, tribal organizations, communities and industry are taking steps to prepare for and respond to an influenza pandemic.

A pandemic is likely to be a prolonged and wide-spread outbreak that could require temporary changes how we operate in many areas of society, such as schools, businesses, churches, transportation and public services.

An informed and prepared public can take appropriate actions to decrease their risk during a pandemic.

Communities, Businesses and Individuals Should:

- Develop preparedness plans as you would for other public health emergencies.
- Participate and promote public health efforts in your state and community.
- Implement prevention and control actions recommended by your public health officials and providers.
- Adopt business/school practices that encourage sick employees/students to stay home.
- Anticipate how to function with a significant portion of the workforce/school population absent due to illness or caring for ill family members.
- Practice good health habits, including eating a balanced diet, exercising daily, and getting sufficient rest and take these common-sense steps to stop the spread of germs:
 - ▶ Wash hands frequently with soap and water or waterless hand cleaner.
 - ▶ Cover coughs and sneezes with tissues.
 - ▶ Stay away from others as much as possible if you are sick.
- Stay informed about pandemic influenza and be prepared to respond.
 - ▶ Consult www.epi.bss.ak.us/id/influenza/fluinfo.htm frequently for updates on state, national and international information on pandemic influenza.
 - ▶ Use national and local pandemic hotlines that will be established in the eventuality of a global influenza outbreak.
 - ▶ Listen to radio and television and read news stories about pandemic flu.



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"I am committed to the promotion and protection of the health of Alaskans, and I am committed to ensuring that we have a strong public health agency that is well prepared to rapidly detect and respond to outbreaks."

Governor Frank H. Murkowski

FLU, BIRD FLU and PANDEMIC FLU

- **Influenza (Flu)** viruses are a group of viruses that primarily infect birds, but also can infect and cause illness in mammals, including pigs, horses, and humans. Influenza has probably existed in mammals and birds since ancient times.
- **Flu epidemics** occur every year or two years when a flu virus undergoes a small genetic change, just enough that many people are susceptible to infection. Severe illness and death during annual influenza epidemics is most common among the elderly and persons with underlying medical conditions.
- **Flu pandemics** occur when there is a major change in the genetic make up of the virus. All humans are susceptible, attack rates are high, and mortality rates may be high as well. Influenza pandemics spread rapidly and can travel around the world in only a few months.
- **Bird flu (avian influenza)** is a contagious disease of birds but may occasionally cause disease in other animals, including humans. The current outbreak of the H5N1 bird flu virus is the most severe outbreak in poultry ever recorded and is unusual in the severity of illness which it causes in humans.

Bird flu risks to people

- Bird flu infection to people from infected poultry is a rare event and usually results in mild disease, but the resulting disease from the current strain of H5N1 is severe. The virus causes a severe viral pneumonia and multi-organ failure.
- Symptoms of bird flu in humans have ranged from typical flu-like symptoms to pneumonia, and other severe and life-threatening complications.

Bird flu prevention and treatment

- Studies suggest that the certain prescription medicines approved for human flu viruses would work in treatment of bird flu infection in humans. Currently there is no widely available vaccine to protect humans against the H5N1 bird flu virus that is being seen in Asia. However, vaccine development efforts are under way.
- The H5N1 bird flu virus is resistant to some antiviral medications commonly used for flu. However, two antiviral medications, oseltamivir (Tamiflu) and zanamivir, are being used to treat flu caused by the H5N1 virus.

What has Alaska done to prepare?

- Completed and posted the Alaska Pandemic Influenza Plan: <http://www.epi.bhs.state.ak.us/id/influenza/fluinfo/pandemicfluplan.pdf>.
- Completed and updated the Alaska Strategic National Stockpile Plan. This Plan will be used to request and receive assets of the CDC Stockpile, including flu vaccine and antiviral drugs, and to distribute to hub communities.
- Completed four mass immunization clinics in 2004 and 2005. These exercises demonstrated that we can immunize 500-600 people an hour.
- Tested our ability to respond to a public health emergency during the 2005 Alaska Shield/Northern Edge statewide exercise.
- Passed new Public Health law in July 2005.
- Implemented the 2005-2006 seasonal influenza vaccine initiative.
- Completed the Emergency Public Information Plan.
- Distributed Alaska Division of Public Health and CDC advisories regarding flu immunizations, flu activity and avian flu to healthcare providers statewide.

What remains to be done?

- Support community efforts to address pandemic influenza in local disaster plans to address pandemic influenza.
- Assure that rural Alaskans have access to medications, vaccine and health care.
- Develop an Alaska stockpile of Medical supplies including antiviral drugs.
- Update the Alaska Pandemic Influenza Plan to reflect new guidance in the U.S. DHHS Pandemic Influenza Plan (<http://www.bhs.gov/pandemicflu/plan/>).
- Expand public information and communication on avian and pandemic flu.
- Ensure that communication systems between federal, state, tribal and local agencies work during emergencies and disasters.
- Identify persons who should be prioritized for receiving limited supplies of antiviral drug and vaccines to prevent disruption of vital services and death.



Frank H. Murkowski
GOVERNOR

STATE OF ALASKA
OFFICE OF THE GOVERNOR
JUNEAU

January 09, 2006

ADMINISTRATIVE ORDER NO. 228

Findings

I, Frank H. Murkowski, Governor of the State of Alaska, make the following findings for the State of Alaska concerning pandemic influenza preparedness:

1. Pandemic influenza presents a credible and unique threat to the health and safety of the people of this state;
2. It is essential that all state agencies coordinate their efforts with local health and emergency agencies to effectively prepare for, respond to, and recover from an outbreak of pandemic influenza in this state;
3. The threat of pandemic influenza affects all agencies and individuals in the state, making it imperative that those agencies work cooperatively to address the planning, training, and information needs associated with a pandemic influenza outbreak.

ORDER

Under the authority of art. III, secs. 1 and 24, of the Alaska Constitution, I, Frank H. Murkowski, Governor of the State of Alaska, order the following:

1. The Department of Military and Veterans Affairs, Division of Homeland Security and Emergency Management (DHS&EM) shall assume overall responsibility for interagency coordination of pandemic influenza preparedness;
2. The Department of Health and Social Services, Division of Public Health (DPH) shall assume primary functional and technical responsibility for pandemic influenza preparedness. The DPH shall prepare and maintain a public health emergency operations plan supplement to the state emergency response plan. This supplement shall include a pandemic influenza preparedness and response component;
3. The DHS&EM and the DPH shall establish an interagency incident management team (IMT) comprised of representatives from local, state, and federal agencies, non-profit organizations, and the private sector, as deemed necessary and appropriate to support planning and operations for pandemic influenza preparedness;

4. To the extent allowed by law, the IMT shall facilitate the coordination of all aspects of public information planning and information dissemination for the State of Alaska, as well as conducting and coordinating training and exercise activities in the state for response and recovery for pandemic influenza preparedness;
5. Each state agency shall support efforts under this Order with available personnel and monetary resources, consistent with law and available appropriations, to assist the DHS&EM and DPH in developing and executing a statewide pandemic influenza preparedness strategy and response to and recovery from a pandemic influenza outbreak;
6. If necessary, the State Emergency Coordination Center in the DHS&EM shall coordinate the state's response to and recovery from an actual pandemic influenza outbreak, in accordance with the state emergency response plan and the DPH emergency operations plan.

This Order takes effect immediately.

DATED at Juneau, Alaska, this 9th day of January, 2006

/s/Frank H. Murkowski
Governor

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State of Alaska

Pandemic Influenza Preparedness Concept Plan

PURPOSE

The purpose of this concept plan is to identify Alaska's interagency strategy for pandemic influenza preparedness.

SITUATION

There is increasing concern about the threat of a global pandemic influenza among scientists and medical experts. The U.S. Department of Health and Human Services (HHS) has published the "*The National Strategy for Pandemic Influenza*" and presents the national approach to address the threat of pandemic influenza. It outlines how we intend to prepare, detect, and respond to a pandemic.

The national "Pandemic Influenza Plan" focuses on three areas:

- **Preparedness and Communication:** Activities that should be undertaken before a pandemic to ensure preparedness, and the communication of roles and responsibilities to all levels of government, segments of society and individuals.
- **Surveillance and Detection:** Domestic and international systems that provide continuous "situational awareness," to ensure the earliest warning possible to protect the population.
- **Response and Containment:** Actions to limit the spread of the outbreak and to mitigate the health, social and economic impacts of a pandemic.

The national plan provides specific guidelines for these activities. The Alaska Division of Public Health (DPH) in the Department of Health and Social Services (DHSS) is using this "Pandemic Influenza Plan" as a guide in crafting the Alaska Pandemic Flu Annex to the Alaska Public Health Emergency Operations Plan.

Pandemic influenza will require cooperation among many organizations and groups. The Alaska Division of Public Health staff and its emergency management partners are preparing contingency plans for combating any outbreak of pandemic influenza. It is DPH's stated goal to support treatment to the ill and limit the spread of pandemic influenza when it strikes and to do so in a way that limits the impact on the State's socioeconomic system. DPH and its partners are establishing clear guidelines for Alaskan communities to use in their community specific pandemic influenza activities. Consequently, it is vital to have community and business leaders as active team members who understand and support these efforts.

ASSUMPTIONS

The following are key assumptions about pandemic influenza:

- The State Emergency Response Plan is the foundation for aspects of pandemic influenza preparedness and response that can be supported from Alaska's all hazards disaster preparedness and response philosophy
- There will be a shortage of effective antivirals for treatment and prevention
- There will be no vaccine for at least six months after the start of the pandemic
- The disease will be a global problem
- There will be widespread illness causing personnel shortages in key areas
- It will last for 6 -12 months rather than days or weeks
- Existing health care facilities will be overwhelmed
- The global nature of pandemic influenza will reduce national level resource support

INTENTIONS

The Division of Public Health (DPH) and the Division of Homeland Security and Emergency Management (DHS/EM) have created an Incident Management Team (IMT) to work on Alaska's pandemic influenza preparedness. The approach is two-phased:

Phase One (ongoing) is the development of the State's overall pandemic influenza preparedness strategy and will be completed by early January 2006. DHS&EM and DPH have staffed an interagency Incident Management Team (see attached Organization Assignment Sheet) to support operations and planning during this phase of preparedness activities. The Team's efforts have been directed at establishing overarching objectives and a process suited to accomplishing those objectives. Once approved, this concept plan will represent the culmination of the Team's work in Phase One.

Phase Two will be the implementation of the State's pandemic influenza preparedness strategy. The objectives outlining this strategy are listed in the following section of this document. DHS&EM and DPH intend to implement the strategy using the Incident Management Team concept; however, the composition of that team will be established to support the operations. The Incident Commander of the expanded IMT will determine planning and briefing schedules for team members. Additionally, the IMT will be the vehicle for supporting the public information, outreach and training/exercise events necessary to support community pandemic influenza preparedness. It will be essential to have community leaders who understand and support these efforts as active team members.

OBJECTIVES

1. Alaska Pandemic Influenza Annex

- a. Written as Annex to DPH Emergency Operations Plan
- b. Identifies triggers and associated recommendations/actions for:
 - Enhanced surveillance and laboratory testing to detect Pandemic Influenza
 - Isolation & Quarantine recommendations

- Social distancing measures
- Anti – Viral distribution and dispensing
- Vaccine distribution and dispensing
- Establishing Alternate Care Sites (separate annex)

2. Public Information and Education

- a. Frequent, consistent, and simultaneous messages for all markets
- b. Include guidance and/or information on symptoms, self-screening, social distancing and other means of controlling the spread of disease
- c. DPH will develop the messages
- d. IMT will support delivery of message (State Emergency Coordination Center (SECC) and JIC (Joint Information Center))

3. Outreach

- a. Senior leadership visits (e.g. Commissioners DMVA and DHSS to Mayors)
 - Meet with senior community officials around the State to include officials from industry, health care, business, tribal organizations, schools, non-governmental organizations and government
 - Provide individuals in senior leadership positions an executive summary of the potential consequences of pandemic influenza and recommendations relative to their community regarding issues such as quarantine or social distancing
 - Obtain senior leadership support and endorsement for follow-on training and exercise visits
- b. Conduct a speakers' bureau to present issues / plans to key stakeholder audiences beginning January 2006
- c. Present Pandemic Planning information to members of the Alaska Legislature through hearings, presentations, and individual meetings January to May 2006. In addition legislative hearings and presentations are open to the public, so many other individuals will be reached through this effort.
- d. DPH develop agenda and presentations
- e. IMT support logistics (State Emergency Coordination Center (SECC))
- f. Begin by end of January 2006

4. Training and Exercise

- a. Based on DPH updated Alaska Pandemic Influenza Annex and HHS "*Pandemic Influenza Plan*"
- b. Local and Regional training and exercise visits – tailored to each community/region
 - Local pandemic influenza plan development
 - Public information/education & risk communication
 - Alternate Care Sites
 - Mass and targeted Dispensing Clinics
 - Social distancing
 - Table top and functional exercises
- c. DPH coordinate development of course content and scenarios
- d. IMT support logistics (State Emergency Coordination Center (SECC))
- e. Begin by end of January 2006



PANDEMIC INFLUENZA

Presentation to the Senate HESS Committee
February 13, 2006

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Alaska State Epidemiologist
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Overview

- ▶ Influenza Primer
 - What is influenza?
 - What is avian influenza ("bird flu")?
 - What is a pandemic?
 - Why should we care?
 - What are the misperceptions?
- ▶ Influenza Pandemic Preparations
 - What is the role of public health?
 - What can we do to protect our businesses and communities?

Influenza: What Is It?

- ▶ Respiratory tract infection caused influenza virus
- ▶ Transmission by respiratory droplet
- ▶ Illness begins 1-5 days after exposure
- ▶ Infectious from day before or day of illness onset, lasts 3-5 days



- ▶ Influenza A - frequent winter epidemics, causes pandemics
- ▶ Influenza B - occasional winter epidemics
- ▶ Influenza C - episodic infection

Influenza A

- ▶ 16 H types, 9 N types
- ▶ Aquatic bird reservoir
- ▶ Occasionally, strains will "jump species"



All H and N types



Human Influenza



- ▶ Influenza A subtypes that spread widely among humans
- ▶ H1N1, H3N2, and H1N2 currently circulating

Avian Influenza

- ▶ Influenza A viruses found mainly in birds
- ▶ Two types:
 - Low pathogenic: disease may be mild or absent
 - Highly pathogenic: mortality can approach 100% in birds



H5N1 Avian Influenza

- ▶ First isolated from terns in South Africa in 1961 (low path)
- ▶ Circulates globally in wild birds
- ▶ Highly pathogenic strain emerged among domestic poultry in Hong Kong in 1997
 - Severe disease identified among humans - "bird flu"
- ▶ Re-emerged in southeast Asia in December 2003



Transmission of H5N1 Avian Influenza

- ▶ Direct contact with infected domestic poultry or their secretions
- ▶ Human-to-Human: Rare to date
 - Rare healthcare worker transmission
 - Family cluster in Thailand, Sept. 2004



Spread of H5N1, 2005



Why Should We Care? Recipe for an Influenza Pandemic



- ▶ A new influenza virus to which the population has little immunity
 ✓ H5N1
- ▶ Ability of the virus to replicate in humans and cause disease
 ✓ 166 cases resulting in 88 deaths in Eurasia (between Dec 2003 and Feb 9, 2006)
- ▶ Efficient and sustained person-to-person transmission
 ✗ Not yet...

Potential Clinical Impact of Pandemic Influenza in Alaska

Outcome	Approximate Number
Illness	200,000
Clinic visits	100,000
Hospitalizations	2,000-22,000
ICU admissions	300-3,000
Mechanical ventilation	150-1,500
Deaths	400-4,000

Common Misperceptions About Pandemic Influenza

- ▶ An influenza pandemic is overdue and it will be caused by H5N1 "bird flu".
- ▶ "Gambler's fallacy". There is no biological clock ticking.
- ▶ We do not know which type of influenza will cause the next pandemic.
- ▶ But we do have better technology to recognize trends in viral evolution and infection in animals and humans than in the past.



Common Misperceptions About Pandemic Influenza

- ▶ Like a forest fire, an influenza pandemic can be snuffed-out if caught early.



- ▶ Given the short incubation period, viral shedding very early after infection, and ease of spread, this is highly unlikely.



Common Misperceptions About Pandemic Influenza

- ▶ There is nothing that we can do and the Federal government is going to take care of this anyway.
- ▶ Preparedness is critical for mitigation but
 - Vaccines will probably not be available at the beginning of the next pandemic.
 - Antiviral drugs will likely be in short supply.
- ▶ There are things that we can all do...

Public Health's Role

- ▶ Surveillance for Human Disease
- ▶ Disease Control Policies and Strategies
- ▶ Plan --- Train --- Exercise
- ▶ Encourage and Support Partners:
 - Medical System
 - Community Leaders
 - Business Leaders
 - Schools



We're Better Prepared Than Ever Before...

- ▶ New Public Health Law in Effect
- ▶ Emergency Plans for:
 - Incident Command Operations
 - Epi Investigations
 - Mass Prophylaxis (preventive treatment)
 - Pandemic Flu
 - Training of Public Health Staff
- ▶ Mass Prophylaxis Clinic Exercises
- ▶ Human Disease Surveillance
- ▶ Bird Disease Surveillance



But Much Work Remains...

- ▶ Engaging Faith Organizations, Communities, Businesses, & Schools
- ▶ Alternate Care Site Exercises
- ▶ Developing Antiviral Strategies
- ▶ Identification of Essential Services and Workers
- ▶ Isolation and Social Distancing Strategies

State of Alaska Pandemic Influenza Preparedness Concept Plan

- ▶ Planning Assumptions
 - State Emergency Response Plan = Foundation for Preparedness and Response
 - Shortage of antivirals
 - No vaccine for at least 6 months after start of pandemic
 - Global problem
 - Widespread illness = personnel shortages
 - Duration of 6 – 12 months
 - Health care facilities overwhelmed
 - Reduced national-level resource support

State of Alaska Pandemic Influenza Preparedness Concept Plan

► Objectives

1. Alaska Pandemic Influenza Annex
 - Annex to Division of Public Health's Emergency Operations Plan
 - Based on National Pandemic Influenza Plan
 - 2nd Edition completed and posted to internet
2. Public Information and Education
3. Outreach to Community and Business Leaders
4. Training and Exercise Support for Communities

Guidance to Business & Community Leaders

Pre-Pandemic:

- Identify "essential functions and workers"
- Determine potential impact on services and supplies
- Establish emergency communications plan

During Pandemic:

- Establish sick leave policies to keep ill employees home
- Use flexible workplace and work hours

Before, During, and After:

- Share best practices and "lessons learned"
- Stay informed

Legislative Support for Preparedness

Accomplished in 2005 Session:

- ▶ Updated state public health laws (HB 95)
- ▶ Authorized funding for new Virology Laboratory (SB 73)

Next Steps:

- ▶ Community leadership
 - Ask local leaders about status of emergency plans
 - Participate in community emergency planning meetings
- ▶ Governor's funding initiative for public health preparedness
- ▶ Possible future legislation to improve preparedness

\$7.23 Million FY2007 Budget Initiative

Alaskans Safe & Secure from Infectious Disease Threats and Public Health Emergencies

- ▶ **\$1.0 M:** Epi disease surveillance, investigation, and control
- ▶ **\$1.0 M:** Public health laboratory disease surveillance
- ▶ **\$1.5 M:** Public health nursing support for community-based:
 - Emergency planning and exercises
 - Monitoring of health status
 - Disease investigation and control
- ▶ **\$2.5 M:** Immunization & Disease Surveillance Registries
 - \$2.05 M: One-time capital project development
 - \$0.45 M: On-going maintenance expense
- ▶ **\$1.23 M:** Alaska-based antiviral stockpiles

In Summary

- ▶ It is likely that a pandemic of influenza will happen in the future.
- ▶ We are better prepared than ever, but have *much* more work to do.
- ▶ The work we do to improve preparedness for pandemic influenza makes us better prepared for other threats and emergencies.
- ▶ You play a significant leadership role for Alaska's citizens; we hope you will partner with us.

Additional Information

- ▶ www.pandemicflu.gov
- ▶ www.pandemicflu.alaska.gov
- ▶ [The Great Influenza](#), John M. Barry, Penguin Books, 2004